

Atlantic Wood Industries

Portsmouth, Virginia
Superfund Program Site Fact Sheet

Type of Facility: Wood Preserving

Contaminants: Creosote, Pentachlorophenol (PCP), Chromium, Arsenic

Funding: Enforcement financed

Site Description and History

Atlantic Wood Industries (AWI) operated a wood preserving facility on a 47.5-acre site along the Elizabeth River in Portsmouth, Virginia, from 1926 to 1990. Both creosote and PCP processes were used. The site was placed on the National Priorities List (NPL) in February 1990.

Concern at the site is focused on raw material, finished product storage areas, and the plant processing area. Waste present includes soils contaminated by leakage from four aboveground tanks containing waste liquid creosote, 20,000 cubic feet of land filled creosote, and PCP contaminated wood chips. Groundwater is not used as a water source within a three-mile radius of the site. Public utilities supply water in this area. In 1986, Atlantic Wood Industries removed the four aboveground storage tanks containing 350,000 gallons of liquid creosote waste. Under a Consent Order with the Environmental Protection Agency (EPA), the facility excavated and sealed the storm sewer system next to Elm Avenue.

Work on the storm sewer project was completed in the summer of 1995, reducing contaminant infiltration in the groundwater and surface runoff into the Elizabeth River. Contaminated sediment at the outfall from the storm sewer system next to the Elizabeth River was also removed. Contaminated soil generated in the storm sewer and outfall removal project was stored on site in lined containers and disposed off site in 1997.

The Record of Decision (ROD) for OU-1 (contaminated soils) was signed on September 29, 1995. It called for remedial work involving surface soils, sediments, and dense non-aqueous phase liquid in the subsoils on site. The ROD identified ex-situ bioremediation of the soil with on-site placement as the optimum plan. The alternate plan, if the optimal remedy did not reach minimum acceptable standards, was designated as low temperature thermal desorption. The creosote was to be pumped from the subsurface through existing and new recovery wells.

During the design phase of the cleanup, new information was collected which indicated that the site was more contaminated than previously thought. As a result, EPA determined that the cleanup called for in the ROD may not have been the most appropriate plan. They completed an additional feasibility study in fall 2006 to take this new information into account.

In 2003, as part of a removal action, AWI and the Navy completed a cleanup of the acetylene sludge from a wetland that straddled the property line of the site and the South Annex of the Norfolk Naval Shipyard. The work included restoration of a wetland. The other part of the removal action involved capping an abrasive blast media (ABM) area on the site. This work was put on hold and folded into the overall soil cleanup.

The groundwater on site is covered under OU-2. The remedial investigation and the feasibility study were completed in fall 2006 to evaluate the groundwater contamination and remedial alternatives.

OU-3 addresses the water quality impacts of the site on the Elizabeth River. In summer 2005, EPA collected a number of 20-foot corings of river sediments and found extensive creosote contamination. The remedial investigation and the feasibility study were completed in fall 2006 to evaluate the contamination and remedial alternatives to address it.

Threats and Contaminants

Benzene, toluene, xylenes, and naphthalenes have been detected in the air. Creosote, pentachlorophenol (PCP), and other contaminants from former wood treating processes have been detected in the groundwater and soils. Polynuclear aromatic hydrocarbons (PAHs) are in site sediments. Off-site sediments also contain phenol and PCP. PCP, arsenic, and chromium have been detected in surface water near the site. Direct contact or ingestion of soil on site could harm people. Direct contact with materials that have moved off site or inhaling dust from the site also poses a threat to human health and the environment. Oyster beds are within three miles downstream. Studies by the Virginia Institute of Marine Science have shown that oysters within this distance have accumulated levels of creosotes.

Current Site Status (last update: March 2008)

EPA's National Remedy Review Board approved EPA's preferred site cleanup alternates in February 2007 and a ROD was issued for the whole site on December 21, 2007, that selected the alternatives to be implemented.

The ROD describes activities to address soil, ground water, and sediment contamination in the Southern Branch of the Elizabeth River. The main components of the selected remedy include: a clean soil cover over the areas of contaminated soil; excavation of creosote hot spots found on the west side of the AWI property with disposal on the east side; monitored natural attenuation (MNA) of ground water; installation of a sheet pile wall off-shore in the Southern Branch of the Elizabeth River to prevent creosote migration to the river; dredging of river sediments with disposal of dredged sediment mainly behind the sheet pile wall (creating new land); and enhanced monitored natural recovery (MNR) of sediments. This ROD addresses all of the site contamination and replaces the 1995 ROD which only addressed a portion of the site.

Continued use and new potential uses of the site are being considered as cleanup alternatives are being developed. Currently, AWI operates a pre-stressed concrete production facility on the eastern section of the site, while the western section is largely unused.

Community Relations and Concerns

This facility has been named as a pollution source to the Elizabeth River in studies by the Chesapeake Bay Foundation, the Virginia Institute of Marine Science and the Elizabeth River Project.

The Community Relations Plan for the site was updated in January 1991. On July 8, 1995, a public hearing was conducted near the site in Portsmouth, Virginia for the OU-1 Proposed Remedial Action Plan (PRAP). On July 24 and August 21, 2007, EPA held public hearings in Portsmouth on the PRAP for the whole site. Public comments were included in both RODs.

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